

The Melanian illustrated (figs. 9, 10) will be noticed in a later article.

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SOUTH AMERICAN NOTES.<sup>1</sup>

BY DR. WM. H. RUSH, U. S. N.

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I have been adding lately to my collections many specimens, nearly all the work having been done near Maldonado, but few species being added, and they include the *Unio* *Rhuacoica* and *Charmana*, a fine, large *Anodonta*, *Azara labiata*, *Solecurtus Platensis*; and some fine, large, clean specimens of *Mytilus Platensis*, taken from the flukes and shank of an old anchor grappled here. This old anchor proved to be quite a blessing in disguise, for on it were some fine specimens of *Chiton Tehuelchus* and *C. Isabellei*, and a few large *Ostrea Puelchana*. In my dredgings since, I have found a few more *Chitons*, but always on rocky bottoms and attached to stones, so that while adding only a few of these, I have been adding nothing to my stock of the mud-lovers, such as *Corbula*, etc.

Mr. Burnett, the British Vice-Consul here, while visiting the ship, told me that he had occasionally found in his garden a large black slug. The day following proving pleasant found me on my way to hunt the monster, but anxious as I was for the little game of hide and seek, I found time on the way to loiter in a small patch of native trees to hunt for my old friends, the *Helix costellata* d'Orb., to add to the number of my accumulating exchanges. Finally I found Mr. Burnett and we started for the old ruins of a house. I did not anticipate much success when we entered the enclosure, for the ruins were in the center of the town of Maldonado, whose population is about twelve hundred, and the surroundings were extremely dry, there having been no rain for months. However, with willing hands we started in and after turning over many large masses of brick, my companion said, after the exertion of moving an extra heavy one allowed him to recover enough breath to speak, "There is one of those large mail-coated insects I was speaking of," I promptly said, "Hold on!" and proceeded to turn out with my

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<sup>1</sup>The following extracts are from a letter received from our esteemed correspondent, Dr. Wm. H. Rush, dated U. S. S. Yantic, Maldonado Bay, Uruguay, March 7th, 1893.

forceps what seemed to be the veritable monster in all his glory of aestivation, the *Vaginulus solea* d'Orbigny, or more correctly according to Tryon, *Veronicella*. One more specimen was found with its egg-nest. Both specimens were curled, and the tentacles were not visible, in fact, it looked like a lifeless mass of very dark grayish-brown opaque glue, with lighter gray spots: about the size of that warred-upon Bland dollar, with a notch in one side and a crack extending nearly to the center. Turning it over it presented the well known under surface as shown in d'Orbigny's figure. Soon two tentacles came forth, which stuck up in the air, and each had a bright black eye visible in the exact center of its free end; then two more were observed, which projected downward and were broader and stouter than the others, and appeared bifurcated; these latter were constantly in motion, apparently acting as feelers, and later when the animal was moving along on a glass plate seemed to act as suckers. Finally he slowly straightened out until he was ten centimeters long and a little over two wide. I next took a look at the nest, of which I had found several in the woods, only never very large, usually containing about ten or fifteen eggs, but in this one I counted seventy-five, although, much to my discouragement as an amateur artist, in my sketch of it I can only account for forty-five—it was about the size of a silver half dollar and hemispherical, the eggs being regularly arranged around the circumference and held together by a heavy mucous-like rope. The eggs were oval in shape, some perfectly clear and transparent, others yellowish and more or less opaque, and all were covered by the stercoraceous deposit of some insect, I judged. Unfortunately, it broke to pieces before I reached the ship on account of the rough handling of curiosity. One specimen of the solea was much darker in color than the other, and the lighter seemed to fade before I had my water color sketch finished; subsequent finds may show considerable variation in coloration. I killed the first specimen in a solution of bichloride of mercury, 1 to 500, and then dropped it into glycerin hoping thus to preserve its colors, but it has contracted and become very dark: the second I killed in the same solution, in which it still remains. In dying it threw out much mucus, most rapidly and in greatest quantity from the extreme end so that I suspect there may be a mucous pore there; it also seemed to come from its whole surface enveloping it quickly in a cloud, completely hiding it, and in sufficient quantity to render the fluid as nearly opaque as milk.

The mantle retracted from the head, which thus exposed is one cm. long—the jaw was easily seen, by the unaided eye, as a brown crescentic band in the superior lip, and with an ordinary magnifying glass the ridges were easily seen. The whole animal is faded and contracted, but still pliable. The next I obtain will be killed in accordance with your directions in water, and will be kept for you.

Associated with the solea, and in damp places, I found some numbers of the slug which is given in d'Orbigny as *Limax unguis* Fer., but they are not as large as represented in the plate. I found this latter species very plentiful in the Prado at Montevideo and always several individuals together. This latter is in contrast with *Veronicella*, which were alone and widely separated.

I had a few Chitons of both species mentioned in the first part of this letter, alive in my aquarium bottle, for a few days in my room, with a long strip of glass upon which I coaxed them to crawl for the purpose of sketching for water-color work, and was surprised at the rapidity with which they travel, and it was rendered all the more decided when I compared it with the movements of the *Veronicella* which I had in another bottle alongside.

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CONULUS FULVUS MULL.<sup>1</sup> VAR. DENTATUS, N. V.

BY DR. V. STERKI.

Among a number of *Con. fulvus* from Jackson Co., Alabama, kindly sent by Mr. H. E. Sargent, last year, there were a few specimens with distinct "teeth" in the base of the last whorl. Since then, Mr. Sargent has paid attention to the matter, and a few days ago sent me some more specimens in two lots, one from the valley and another from the hills. The latter were most small, young and half grown, and most of them showed 1-2-3 small, white, testaceous deposits in the base of the last whorl, at somewhat irregular intervals, roundish or elongate in a radial direction. They are not high, tooth-like, but quite distinct, whether seen through the shell, or if near enough, from the aperture inside, and recall the same feature

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<sup>1</sup>The species was first described by Müller, not by Draparnand. It may be said again, that *Conulus* is a genus founded on anatomic characters.